



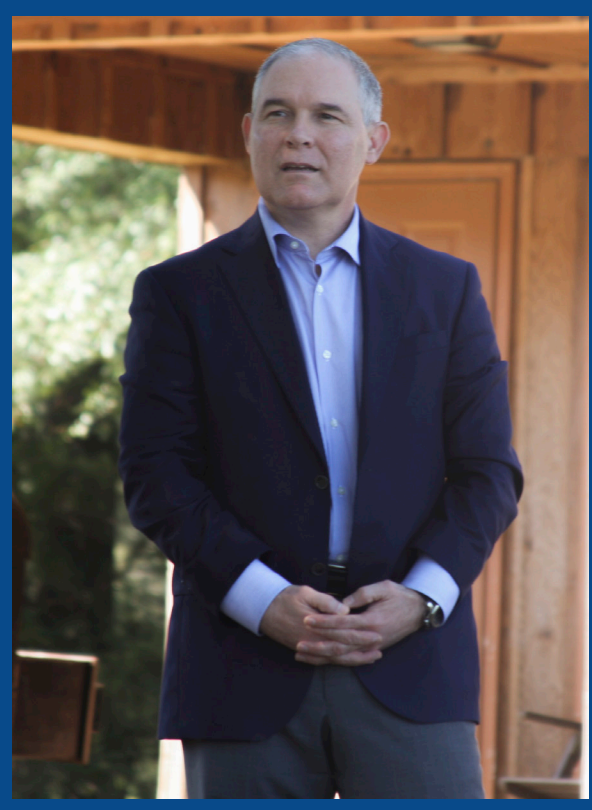
THE GULF OF MEXICO PROGRAM



Protecting and Preserving the Gulf of Mexico

2017 ANNUAL REPORT

EPA Leadership



EPA Administrator Scott Pruitt addresses crowd on visit to Bolton, MS

EPA Administrator Scott Pruitt and Mississippi Governor Phil Bryant listen to farmers on a visit to Bolton, MS





Region 4 Administrator Trey Glen in St. Petersburg, FL post-hurricane



EPA Administrator Scott Pruitt and Region 6 Acting Administrator Sam Coleman in Texas post-hurricane





FISCAL YEAR 2017 INVESTMENTS

LOCATION	DOLLAR AMOUNT	AGREEMENTS
Louisiana	\$1,355,300	4 Cooperative Agreements, 2 EJ Small Grants, 2 Interagency Agreements
Texas	\$1,280,263	5 Cooperative Agreements
Alabama	\$1,177,984	6 Cooperative Agreements
Mississippi	\$979,826	3 Cooperative Agreement, 1 EJ Small Grant, 1 Interagency Agreement
Gulf-wide*	\$823,766	2 Cooperative Agreements, 1 Interagency Agreement
Florida	\$807,070	4 Cooperative Agreements
Oklahoma	\$29,947	1 EJ Small Grant

*One project spanning all five Gulf states (AL, FL, LA, MS, and TX)

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GMP MISSION

The EPA's Gulf of Mexico Program is focused on the **health, productivity and restoration** of the Gulf of Mexico and all the communities that rely on this **national resource**.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

GULF OF MEXICO PROGRAM

2510 14th St., Suite 1212

Gulfport MS 39501

Phone 228-679-5900 / Fax 228-679-2951

Letter from the Director

I am pleased to present the Fiscal Year 2017 Annual Report for the Gulf of Mexico Program (GMP) which highlights the work and accomplishments from October 1, 2016 through September 30, 2017.

2017 was a great year for the GMP. In addition to our normal suite of activities, including ongoing projects we are involved in through cooperative agreements, we received funding under the RESTORE Act to undertake several projects throughout the Gulf. We met or exceeded all of our goal measures in the areas of water quality, habitat restoration, community resilience and education and outreach. The GMP's budget also grew significantly in FY17, making possible more work supporting the Gulf and the people who rely on this national resource for their livelihood and way of life.

And as exciting as 2017 was, 2018 promises to be even better!

2017 was also a year of transitions. In addition to new agency leadership, in April of 2017, our long-time colleague Diane Altsman retired after a 30+ year career with EPA; 23 years of which were spent at the GMP. Diane served as a project manager for many years and ultimately as the GMP's Chief of Staff. She exemplified the best aspects of what our organization aspires to be: technically gifted, hard-working, and people-oriented; all with a heavy dose of southern charm. It is to her record of achievement on behalf of the Gulf of Mexico, and with the full support of all her co-workers and friends, that this year's report is respectfully dedicated.

Sincerely,

A handwritten signature in black ink that reads "Ben Scaggs". The signature is written in a cursive, slightly slanted style.

Ben Scaggs

Director

Who We Are

The Gulf of Mexico Program (GMP) is one of the EPA's Great Water Body Programs whose geographic focus is on the major environmental issues of the Gulf of Mexico region and its watershed.

The GMP is committed to voluntary, non-regulatory actions and solutions that are based on sound scientific and technical information as substantiated by our work with partners and the public.

Our program consists of two teams of experienced staff:



SCIENCE INTEGRATION AND ANALYSIS TEAM

Promoting and implementing science to benefit the Gulf of Mexico and its communities, this team assists Gulf of Mexico stakeholders by participating in activities such as periodically collecting and testing water samples in the watersheds that flow into the Gulf to monitor water quality.



PARTNERSHIPS TEAM

Encouraging positive behavioral practices and promoting awareness of resources, technologies and environmental practices or initiatives, this team works closely with Gulf partners to identify environmental concerns and provides up-to-date education on how shifts in behavior among Gulf stakeholders and tourists can effect change.

What We Do

The Science Integration and Analysis Team and the Partnerships Team work with Gulf of Mexico stakeholders to explore methods to:

- Support the assessment, development and implementation of programs, projects and tools that strengthen community resilience
- Protect, enhance and restore coastal and upland habitats within the Gulf of Mexico watershed
- Promote and support environmental education and outreach to inhabitants of the Gulf of Mexico watershed
- Restore and/or improve water and habitat quality to meet water quality standards in watersheds throughout the five Gulf states and the Mississippi River Basin

Community Liaison Initiative

A key aspect of the GMP is the Community Liaison Initiative, which strives to enhance the understanding of and appreciation for preserving the Gulf of Mexico in underserved and underrepresented communities. GMP staff who are involved in the initiative are members of the National Council on Aging Senior Environmental Employees Program. They assist both the Partnerships Team and the Science Team as part of the initiative, promoting just environmental practices and calls to action among varying partners in creating resilient communities.

Our Team

Senior Management



BEN SCAGGS
DIRECTOR
GMP since 2012; EPA RESTORE Council Representative and EPA NRDA Trustee Representative; Background in Public Administration
Email: scaggs.ben@epa.gov



DIANE ALTSMAN
CHIEF OF STAFF
GMP 1994-2017; Administrative and Budget Approval Activities; Management of Staff and Resources; Background in Biological Sciences

Administration



MATT BEISER
PROGRAM ANALYST
GMP since 2005; Cooperative Agreement, Interagency Agreement & Grants Management; Property/Inventory Manager; Background in Education
Email: beiser.matt@epa.gov



GERRY MARTIN
PROGRAM ANALYST
GMP since 2010; Budget/Funds Control Officer; Administrative and Human Resources; Background in Budget and Accounting
Email: martin.gerry@epa.gov

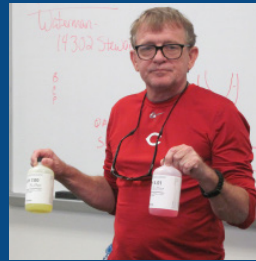
Partnerships Team



LAKESHIA ROBERTSON
LEAD LIFE SCIENTIST, PARTNERSHIPS TEAM LEAD
GMP since 2007; Education/Outreach Activities; Environmental Justice Issues; Coastal Community Resilience; Background in Biological Sciences
Email: robertson.lakeshia@epa.gov



JEANNE ALLEN
PHYSICAL SCIENTIST
GMP since 2006; GIS and Graphics Expert; Education/Outreach Activities; Background in Geography
Email: allen.jeanne@epa.gov



JERRY BINNINGER
ENVIRONMENTAL PROTECTION SPECIALIST
GMP since 1998; Coastal Community Resilience; Education/Outreach Activities; Background in Urban Planning
Email: binninger.jerry@epa.gov



JOHN BOWIE
ENVIRONMENTAL ENGINEER
GMP since 2006; RESTORE Project Manager/NEP Liaison; Background in Civil Engineering
Email: bowie.john@epa.gov

Science Integration and Analysis Team



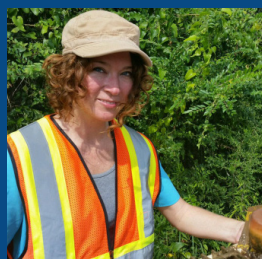
TROY PIERCE
CHIEF SCIENTIST, SCIENCE TEAM LEAD
 GMP since 2008; RESTORE and NRDA Technical Expert; Tribal Contact; U.N. Environmental Program Land Based Sources Protocol Science Expert; Background in Agriculture, Water Quality and Microbiology
 Email: pierce.troy@epa.gov



JERRY BOOS
LIFE SCIENTIST
 GMP 2011-2017; Habitat Restoration/Best Management Practices; Water Quality/Field Monitoring/Community Science; Background in Forestry/Wildlife Management



LAEL BUTLER
ENVIRONMENTAL SCIENTIST
 GMP 2006-2017; Performance Measures/HQ Reporting Expert; Water Quality/Field Monitoring/Community Science; Background in Geology



RACHEL HOUGE
PROGRAM ANALYST
 GMP since 2013; Federal Funding Opportunities RFP Expert; Water Quality Monitoring/Quality; Assurance/Community Science; Background in Anthropology and Environmental Science and Policy
 Email: houg.rachel@epa.gov

Science Integration and Analysis Team cont.



CALISTA MILLS
PHYSICAL SCIENTIST
 GMP since 2017; Water Quality/Field Monitoring; Background in Geosciences
 Email: mills.calista@epa.gov

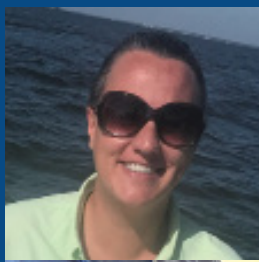


AMY NEWBOLD
ENVIRONMENTAL ENGINEER
 GMP since 2016; Community Science Expert; RESTORE/Estuary Programs/ Water Quality Monitoring; Background in Chemical Engineering and Environmental Engineering
 Email: newbold.amy@epa.gov

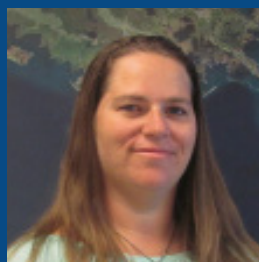


DANNY WIEGAND
ENVIRONMENTAL ENGINEER
 GMP since 2016; Water quality and public health; NRDA and RESTORE; habitat/coastal restoration; Urban Waters Federal Partnership; Hypoxia
 Email: wiegand.danny@epa.gov

Oak Ridge Institute for Science & Education (ORISE) Fellows



KATE DOERING
ORISE RESEARCH FELLOW
GMP since 2017; Water Quality Monitoring; Background in Biological Sciences
Email: doering.kate@epa.gov



AMANDA KINCKE-TOOTLE
ORISE RESEARCH FELLOW
GMP since 2017; Water Quality Monitoring; Background in Marine Science
Email: kincke-tootle.amanda@epa.gov

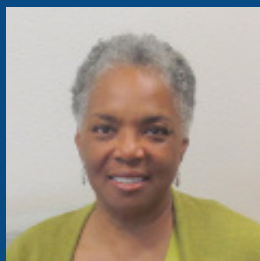


TONY NGUYEN
ORISE RESEARCH FELLOW
GMP since 2017; Environmental Education/Outreach Activities; Environmental Justice Issues; Background in Marine Biology
Email: nguyen.tony@epa.gov



ALLISON WILLIAMS
ORISE RESEARCH FELLOW
GMP since 2017; Education/Outreach Activities; Environmental Justice Issues; Community Resilience; Background in Geography and Environmental Studies
Email: williams.allison@epa.gov

National Academy of Science (NAS) Fellows



DEBRA BUTLER
NAS FELLOW

GMP since 2016; Community Resilience; Environmental Migration; Ecosystems Management; Background in Organizations and Social Change

Email: butler.debra@epa.gov



PHILIP LEE
NAS POLICY FELLOW

GMP since 2017; Education/Outreach Activities; Water Quality/Field Monitoring; Science Communication App Development; Background in Microbiology, Limnology, Wetlands and Nitrogen Cycling

Email: lee.philip@epa.gov

Senior Environmental Employees (SEE) Enrollees



BEVERLY O'HARA
EXECUTIVE ASSISTANT TO THE DIRECTOR

GMP since 2013; Administrative Support to Director; Meeting and Travel Support to Staff; Background in Business and Public Relations

Email: ohara.beverly@epa.gov



CLAUDETTE WALKER
COMMUNITY LIAISON

GMP since 2011; Environmental Justice and Health Disparities of Underserved Communities; Background in Sociology/Social Work

Email: walker.claudette@epa.gov

4 Performance Measures



PERFORMANCE
MEASURE

WATER QUALITY

The GMP continuously works with Gulf Coast states to maximize efficiency and utility of water quality monitoring efforts for local managers. The GMP supports efforts to improve water and habitat quality to meet water quality standards throughout the five Gulf states and Mississippi River Basin.

TARGET: Improve water quality health indicators
RESULT: Improved indicators in 2 water bodies



PERFORMANCE
MEASURE

ENVIRONMENTAL EDUCATION AND OUTREACH

These efforts are cornerstones to environmental stewardship. The GMP's goal is to heighten citizens' appreciation of the Gulf, which leads to positive behavior practices. This can be accomplished by developing hands-on environmental initiatives and engaging residents in restoration programs/projects.

TARGET: Reach 5,000 individuals
RESULT: 11,170 individuals reached

The GMP works with each of the five Gulf Coast states (Alabama, Florida, Louisiana, Mississippi and Texas) and the six Gulf Coast Mexican states on projects that support the following priority areas:



PERFORMANCE
MEASURE

HABITAT RESTORATION

Through funding and partnerships, the GMP is restoring habitat in the Gulf states, especially related to wetlands, coastal prairies and stream banks corridors. This work helps provide for protection from storm damage; supports commercial and recreational fisheries; provides nesting and foraging habitat for birds and other wildlife; protects pollinators; and improves water quality for recreational use and aquatic life.

TARGET: Restore 150 acres
RESULT: 278 acres restored



PERFORMANCE
MEASURE

COMMUNITY RESILIENCE

Resilience is the capacity of human and natural systems to adapt to and recover from change. The GMP supports community vulnerability assessments and the actions communities take to better position themselves to recover from coastal storms and adapt to the impacts resulting from changes in our environment.

TARGET: Reach 40 communities
RESULT: 90 communities reached





Water Quality

Nutrient Sensor Challenge

PARTNERS

- National Oceanic and Atmospheric Administration
- U.S. Geological Survey
- National Institute for Science and Technology
- U.S. EPA

SUMMARY

The Alliance for Coastal Technologies (ACT) Nutrient Sensor Challenge (Challenge) accelerated the development and deployment of affordable nutrient sensors to reduce the cost and complexity of collecting nutrient data and allow for better measurement and tracking of nutrients throughout ecosystems. The Challenge brought focused attention to the need for accurate, dependable and affordable water sensors for nitrate and phosphate. In fact, the EPA is a member of the Challenging Nutrients Coalition (Coalition), which is a public-private partnership of government agencies and non-governmental organizations initiated in 2013. The EPA's Gulf of Mexico Program provides considerable support, including technical staff participation in the Coalition and multi-year contractual management and support.

RESULTS

The Challenge estimated the national market value of these in-demand sensors at \$120 to \$150 million. The top five teams developed and tested prototype sensors with a purchase price goal of at or below \$5,000. In March 2017, EPA announced Systea, S.p.A, as the winner of the Challenge in both the nitrate and phosphate sensor categories. The National Oceanography Centre also received an Honorable Mention for chip-based microfluidics technology. GMP is funding the deployment of the winning low-cost, continuous nutrient sensor to better understand and evaluate nitrogen and phosphorous levels and impacts at selected locations in the Gulf of Mexico. ACT, EPA and the U.S. Geological Survey will convene and coordinate with regional stakeholders to pilot the deployment of nutrient sensors at multiple sites, including the Florida panhandle, Mobile Bay, the Mississippi Sound, the Louisiana Hypoxic Zone, Lake Pontchartrain and coastal Texas.

Pollution Source Tracking for Water Quality Restoration in the Abita River Watershed

PARTNERS

- St. Tammany Parish Government
- Lake Pontchartrain Basin Foundation

SUMMARY

The project is integrating a Decentralized Management Approach to sewage management to provide an interim solution to improve water quality while wastewater regionalization progresses in St. Tammany Parish. The goals of this program are to instruct homeowners on proper operation and maintenance of their Aerated Treatment Units (ATUs) and to quantify organic and nutrient removal and other water quality benefits resulting from improved ATU performance and discharges from unsewered subdivisions.

RESULTS

Water Quality Improvement: Baseline water quality testing is underway.

Environmental Education and Outreach: Door hangers notifying homeowners of the inspection process have been provided to 500 homes and the inspection process has begun. As inspections are conducted, the results will be input into the database for tracking inspection progress, repairs, and estimating load reductions.





Lake Pontchartrain Basin Water Quality Monitoring Program

PARTNERS

- Lake Pontchartrain Basin Foundation
- Louisiana Department of Environmental Quality

SUMMARY

The Lake Pontchartrain Basin Foundation (LPBF) continues successful basin-wide water quality monitoring, pollution source tracking, and educational outreach. The goals are to create more environmentally aware citizens and have waterways removed from the 303d Impaired Waterbodies List. Objectives of this program include:

- Collect water quality data and disseminate it to the public on a weekly basis through the use of media such as the internet, newsprint, television, and radio so that they may make informed decisions on the use of these resources.
- Conduct pollution source tracking activities in the watersheds of waterways listed on the 303d Impaired Waterbodies List.
- Share data with local, state, and federal agencies for use in the 303d Impaired Waterbodies List and Total Maximum Daily Load (TMDL) calculations to locate and correct impaired waterways through partnerships.
- Share the water quality program with the public through LPBF's New Canal Lighthouse Museum and Education Center, and with universities, researchers, environmental groups, environmental engineering firms, and students for the study of these waterways. Also, use new capabilities of the educational kiosk, social media and web mapping to further share data with the public.

RESULTS

The LPBF has continued data collection for the basin-wide water quality monitoring. Since the award for this project, LPBF has collected over 9,000 data-points of various water quality parameters. The data collection allows for education and awareness of environmental conditions, as the data is disseminated to the public on a weekly basis through the use of media such as the internet, newsprint, television and radio. As recently as March 2017, the data has been used to ascertain issues with water quality in Lake Pontchartrain. LPBF observed a trend of elevated fecal coliform at Bayou Castine, which was traced to a break in the sewage line from Fontainebleau State Park.

LPBF's work facilitated the removal of eight waterways from the 303(d) Impaired Waterbodies List for fecal coliform (primary contact recreation) and three for secondary contact recreation. LPBF worked with 84 commercial wastewater treatment plants (WWTP) in Tangipahoa Parish, mainly targeting the Natalbany Watershed. A total of 25 (30 percent) of these plants were not properly permitted to discharge into the waters of Louisiana. Through LPBF's partnership with the Louisiana Department of Environmental Quality's Small Business Assistance Program, the WWTPs were properly permitted, advised of any issues with their plants, and educated about their proper operation. LPBF also provided in-field training for the inspection of home systems for two St. Tammany Parish inspectors. This improved their understanding of the systems they inspected at over 300 properties.

Regional Applied Research Effort (RARE) in Turkey Creek

PARTNERS

- EPA Office of Research & Development Gulf Ecology Division
- Mississippi Department of Environmental Quality
- Turkey Creek Steering Committee
- Land Trust for the Mississippi Coastal Plain
- EPA Region 4

SUMMARY

The GMP is located near Turkey Creek in Gulfport, MS and has the expertise and commitment through its staff scientists and partnerships to support this community. This project supplements ongoing monitoring programs with a fecal-source identification component in an effort to identify sources of pollution in the watershed. Known point sources within the watershed include wastewater from subdivisions and mobile home parks, while a few of the nonpoint sources may include urban areas, wildlife, livestock, and failing or aged septic systems. The Turkey Creek Project is evaluating the following components: nutrient concentrations in water, presence of the pathogen indicator *E. coli*, DNA sequencing and taxonomic analysis of water and sediment, and the presence and genotype of male-specific coliphages (FRNA). The local community, students, residents, and other partners frequently participate in hands-on water quality monitoring which imparts a sense of ownership between residents and their local waterways. This project directly supports the community's desire to protect recreational use of the creek.

RESULTS

Monitoring data are presented to the Turkey Creek Steering Committee, which includes state, federal, local, NGO, business, and community partners. These partners work together to help solve issues in the creek from this data. The partnership has already seen some water quality improvement at one site where infrastructure improvements have occurred. Bacterial source tracking that is currently being conducted will help the partnership during 2018 work on improving other areas of the Creek.





Habitat Restoration

Coastal Prairie Stewardship in Southwest Louisiana

PARTNERS

- Louisiana Department of Wildlife and Fisheries
- Landowners in Southwest Louisiana
- Cattle ranchers in Southwest Louisiana

SUMMARY

This project implemented stewardship actions including prescribed fire and chemical and mechanical brush control on coastal prairie remnants. Vegetation monitoring with the use of remote sensing and field surveys documented success of actions. This project enhanced approximately 2,000 acres of unplowed remnant coastal prairie, improved pollinator habitat, and provided outreach. Additionally, this work strengthened partnerships with the cattle ranching community in southwestern Louisiana by expanding the awareness of and appreciation for coastal prairies, fostering a more informed view of this habitat.

RESULTS

- Pre-treatment photo monitoring of prairie compartments was completed.
- Five prescribed burns were completed totaling 1,295 acres. This served to restore and enhance coastal prairie habitat. (i.e. invigorating prairie plant life, stimulating seed production, etc.).





Cemetery Resaca Restoration Project

PARTNERS

- City of Brownsville
- University of Texas at Brownsville
- United Brownsville
- Brownsville Historical Association
- Brownsville Community Improvement Corporation
- Texas Parks and Wildlife
- Brownsville Public Utilities Board

SUMMARY

The project involves the restoration of one of Brownsville's many regionally unique wetland areas, Cemetery Resaca, which eventually flows into the Brownsville Ship Channel and the Gulf of Mexico. Leveraged funds in the amount of \$8 million were used to dredge out accumulated sediment, etc. from resacas (also known as oxbow lakes) and wetlands (wetlands had become too shallow because of accumulated sediment and bulkheads). The project also included bank improvements (e.g., shallow-sloped bank, native vegetation planting and storm water treatment prior to entering waterways) and filtration of ponds and buffer areas. Water quality data was compared with baseline data previously collected to determine water quality changes.

RESULTS

Habitat Restoration

- 27,294 square feet of aquatic and riparian habitat was restored.
- A 5,687 square foot storm management area has been created.

Water Quality Improvement

- It is difficult to distinguish changes from restoration activities or changes from other factors because of limited data sets at Resaca Blvd.

Environmental Education and Outreach

- Junior Resaca Explorers Program was developed and taught a total of 1,035 students in grades 2-4 about native wildlife in Resacas and the benefits of the Project.
- Over 50 events and 17 tours were conducted to educate the community about the Resaca Restoration Project, reaching over 6,250 residents.





Environmental Education and Outreach

A Gulf of Mexico Program Coastal Training Initiative

PARTNERS

- Weeks Bay Foundation
- National Oceanic and Atmospheric Administration Coastal Services Center
- The Gulf of Mexico National Estuary Programs
- Gulf Coast Sea Grant Programs
- Gulf of Mexico Alliance Coastal Community Resilience Priority Issue Team
- The Society for Ecological Restoration Southeast Chapter
- Southeast Watershed Forum

SUMMARY

The Gulf of Mexico Coastal Training Project is a unique collaboration among the five Gulf Coast National Estuarine Research Reserve Coastal Training Programs. Through the Gulf of Mexico Program, Alabama, Florida, Louisiana, Mississippi and Texas are now working together to address priority issues affecting the entire Gulf of Mexico region. Using shared information and technology, the Gulf of Mexico Coastal Training Project is educating professional audiences and coastal communities in each of the five Gulf states. From coastal community resilience to habitat conservation, topics covered in the Gulf of Mexico Coastal Training workshops address priority issues and promote activities that improve the health of the Gulf of Mexico.

RESULTS

More than 1,137 individuals in 51 communities have been exposed to the program.



The Florida Aquarium: Watershed Investigations—Engaging Underserved Youth in Exploring Climate Change

PARTNERS

- Hillsborough County Public Schools
- Florida Fish and Wildlife Conservation Commission
- Gulf of Mexico Coastal Ocean Observing System
- Tampa Bay Estuary Program
- Tampa Electric Company
- Gulf of Mexico Alliance

SUMMARY

The project aims to provide hands-on, minds-on exploration of the health of coastal ecosystems of Tampa Bay and the Gulf of Mexico. Students are introduced to the local watershed, water quality, coastal habitats, climate change and the role students can play in protecting water resources.

RESULTS

The Florida Aquarium delivered a sustained, meaningful watershed education experience to 4,313 underserved students in a three-year span. In the last year alone, the aquarium reached 1,723 underserved students.



Boat People SOS Youth Education Program

PARTNERS

- Boat People SOS
- Alabama Department of Environmental Management
- Dauphin Island Sea Lab
- Grand Bay National Estuarine Research Reserve
- Mobile Bay National Estuary Program
- Alma Bryant High School
- University of South Alabama

SUMMARY

The Gulf of Mexico Program developed an environmental program to enrich the existing Boat People SOS Youth Summer Workshop. This workshop brought together partners in Alabama to teach students about watersheds and how they work, off-bottom oyster farming, the importance of water quality to the survival of oysters, and the effects of marine debris and micro-plastics. Students also engaged in habitat walks, observed prescribed burns, kayaked on a National Estuarine Research Reserve, and learned the process of conducting experiments and capturing the associated data.

RESULTS

More than 20 Vietnamese youth participated in the program.

Annual Share Fair Program

PARTNER

- Hancock County Middle Schools

SUMMARY

This project involved discussions about clean water and air. Demonstrations were given on how water samples are collected, transported, analyzed, evaluated, recorded and finally disposed. Gulf of Mexico Program staff members gave four 25-minute presentations that included demonstrations of the YSI water sampling instrument and the Van Dorn water collector. The hands-on session with the instruments was well-received and provoked students to ask very good questions related to air and water quality. GMP staff members also emphasized the importance of occupations related to Science, Technology, Engineering, and Mathematics (STEM). The number of STEM related jobs is projected to grow by more than 9 million by 2022.

RESULTS

More than 110 students attended the Gulf of Mexico Program's session.



University of Southern Mississippi 2017 Teachers Professional Development Training Opportunity

PARTNERS

- University of Southern Mississippi
- Gulf Region Health Outreach Program

SUMMARY

Gulf of Mexico Program staff participated in a summer workshop series offered by the University of Southern Mississippi (USM) as a part of the Gulf Region Health Outreach Program (GRHOP). USM is a collaborator of the GRHOP which was created as part of the Deepwater Horizon Medical Benefits Class Action Settlement. The GRHOP consists of four programs, one of which is focused on strengthening environmental health literacy in high schools across Gulf communities. Two-day workshops were offered to secondary educators in Mississippi's six coastal counties for their participation. The GMP's contribution to the workshop titled "Seafood Safety and Microbes in the Environment" involved classroom and field instruction. The instruction focused on water quality monitoring, using a multi-parameter sonde, collecting surface water samples, and determining the most probable number of colony forming units of E. coli in the samples collected using the IDEXX Colilert method. As a contribution to the workshop titled "Plastics, Prescription Drugs and Chemical Pollutants", the GMP provided equipment needed for the collection and processing of water samples for micro-plastic identification and supported the lead instructors from the NOAA Marine Debris Program and the Mississippi State University Coastal Research and Extension Center. GMP staff participated in the collection of water samples from the beach, sifting/sieving sand to recover macro- and micro-plastic debris, filtering water samples, and identifying micro-plastics using a microscope.

RESULTS

- 19 teachers earned 1.4 continuing education units (CEUs) for participation in the "Seafood Safety and Microbes in the Environment" workshop.
- 24 teachers earned 1.3 CEUs for participation in the "Plastics, Prescription Drugs and Chemical Pollutants" workshop.
- A total of 43 secondary educators were reached and 55.9 CEUs earned.



Poarch Band of Creek Indians Environmental Day

SUMMARY

Staff members of the Gulf of Mexico Program participated in the Poarch Band of Creek Indians Environmental Day. Students from Kindergarten to 12th grade, rotated through eight activity stations. At two of these stations GMP staff demonstrated the EnviroScope, an interactive model addressing pollution sources and prevention and showed students how water is collected by scientists.

RESULTS

There were 150 students in attendance.



Pearl River Community College Citizen Scientist Day Camp

SUMMARY

Staff members of the Gulf of Mexico Program conducted a workshop for middle school students at Pearl River Community College. Students were taught about the process and types of instruments scientists use to collect and analyze water quality data. Students also participated in discussions about how to prevent pollution from reaching water bodies.

RESULTS

Approximately eight students attended.

Reduce, Reuse, and Recycle

PARTNERS

- Gaston Point Elementary School
- Port of Gulfport

SUMMARY

GMP staff conducted a “Reduce, Reuse and Recycle” presentation at Gaston Point Elementary. The presentation contained visual aids to help students understand the difference between reuse and recycling, and ways to reduce waste. After the presentation, the students played recycle bingo games. This was followed by a recycling art project using CDs and DVDs. Students gained a better understanding of which objects can actually be recycled.

RESULTS

Approximately 150 students and teachers combined were in attendance.



2017 Student Ocean Conference

PARTNERS

- National Mississippi River Museum & Aquarium
- U.S. Department of Agriculture - Natural Resource Conservation Service
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- Iowa Department of Natural Resources

SUMMARY

The 2017 Student Environmental Conference was held in Dubuque, Iowa, at the National Mississippi River Museum & Aquarium on September 21-22, 2017. The goal of the conference was to connect students to the watersheds they live in, and explain how the activities in these watersheds affect the water quality and life of the oceans and the world. The students participated in field trips and hands-on activities. These activities led to conversations about how to protect the watersheds that feed the rivers and the ocean ecosystems.

RESULTS

52 students and adults participated.



Gulfport High School Water Quality Monitoring Initiative

PARTNERS

- Port of Gulfport
- Mississippi Power
- Land Trust for the Mississippi Coastal Plain
- Turkey Creek Community Initiative
- Mobile Bay National Estuary Program
- U.S. Department of Agriculture

SUMMARY

The Gulf of Mexico Program, along with partners, will assist Gulfport High School with expanding its Science, Technology, Engineering, and Mathematics (STEM) Institute to offer minds-on and hands-on learning activities to students. Through experiential exercises, students will discover the importance of sound science in addressing environmental issues. To further learning and promote a continuum, a list of resources will be compiled, ultimately creating a toolbox of information/activities that align well with varied class lectures. This effort will help increase environmental literacy and promote stewardship as well as provide student volunteer opportunities by pairing them with involved partners.

RESULTS

28 students for initial activity.



Half-Shell High School - Development of a Sustainable Seafood Community Workforce Using Off-Bottom Oyster Farming

PARTNERS

- Board of School Commissioners of Mobile County
- Alma Bryant High School
- Auburn University
- Dauphin Island Sea Lab
- Organized Seafood Association of Alabama

SUMMARY

Through this project, a service learning oyster farm will be developed where high school students can study all aspects of oyster mariculture. Oysters will be grown using off-bottom oyster farming gear, as well as on-bottom in an oyster riparian rights area leased from the University of Alabama. Oysters will be grown for both restoration purposes and the half-shell market. The project is designed to allow multiple participants to operate 2-acre growing blocks. Some of the blocks will be operated by commercial half-shell oyster farmers, and the blocks will also provide opportunities for student internships and jobs. Other blocks will be used for training, research and seed production nursery operations.

RESULTS

300 students per year.



Choctaw Wildlife Jamboree

PARTNERS

- Choctaw Wildlife & Parks
- Mississippi State University Extension Services

SUMMARY

GMP staff participated in the annual Choctaw Wildlife Jamboree in Philadelphia, MS and provided visitors with the experience of being a field scientist by guiding them in the use of a Secchi disk, a Van Dorn sampler and a data sonde to collect water samples and data. This demonstration helped explain why water quality is important and the value of water quality monitoring. Additionally, the children learned the importance of recycling through hands-on recycling activities.

RESULTS

Approximately 75 children/adults participated.

Lynn Meadows Discovery Center Free Friday

PARTNERS

- Port of Gulfport
- Mississippi Power
- Gulfport High School

SUMMARY

Members of the Gulf of Mexico Program staff participated in the Lynn Meadows Discovery Center Free Friday to teach families the importance of recycling as well as reducing and reusing. Children were invited to create mosaic marine art using recycled CDs and DVDs. Families watched a demonstration of how scientists use a Secchi disk, Van Dorn sampler, and a data sonde to collect water samples and data. This demonstration helped explain why water quality is important to everyone.

RESULTS

70 people visited the booth.





Community Resilience

Preserving the Culture and Richness of Tribal Lands

PARTNERS

- Louisiana Sea Grant
- Isle de Jean Charles Band of Biloxi-Chitimacha-Choctaw Indians

SUMMARY

Through this project, GMP staff participated in a meeting with Chief Albert Naquin of the Isle de Jean Charles Band of Biloxi-Chitimacha-Choctaw Indians and Louisiana Sea Grant in Houma, Louisiana. Louisiana Sea Grant presented and demonstrated the Community Resiliency Index (CRI) for tribal members and conveyed its ability to assess resiliency levels and define problem/vulnerable areas. Participants received valuable information regarding how to develop hazard mitigation plans using the CRI to help reduce the cost of insurance and how to receive funds through FEMA if a disaster occurs.

Mississippi-Alabama Sea Grant developed the CRI to assist communities/tribes in understanding their vulnerabilities. The CRI is a broad based self-assessment tool that can help communities understand how well they are prepared for a disaster.

RESULTS

There were two communities represented and 13 participants.



Student Stewardship Summit

PARTNERS

- Mississippi-Alabama Sea Grant
- University of Southern Mississippi Gulf Coast Research Laboratory

SUMMARY

Junior and senior students from local area high schools participated in the Student Stewardship Summit, where they presented information on how to make their communities more resilient. The presentations covered an array of topics including:

- reduced soil erosion
- salt water intrusion
- critical record storage
- emergency evacuations
- early warning systems
- additional concepts

Students were judged on resiliency concepts and knowledge of the subject matter by local resilience specialists. The first place winner presented a disaster warning system for non-English speaking citizens.

RESULTS

Over 125 students participated in the summit.

Regional Environmental Center of Central & Eastern Europe

SUMMARY

A GMP staff member traveled to Ohrid, Macedonia to attend a workshop hosted by the Regional Environmental Center of Central and Eastern Europe (REC). EPA's Office of Research and Development has been focusing its efforts on assisting municipalities, localities, and regions, both domestic and foreign, in attaining their sustainability goals, especially with respect to water resources. This combined regional workshop is part of the Building Local Community Resilience for the Sustainable Development of Watersheds in South Eastern Europe (CRESSIDA) project, a cooperative agreement between the REC and EPA. The workshop hosted approximately 50 national government officials from Albania, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Kosovo, Montenegro, and Serbia. The topics of discussion for the workshop included local challenges and opportunities on water resources and their management and translating sustainability and resilience into national actions. Jeanne Allen presented the Coastal Community Resilience Index Tool at the workshop and received favorable input from the participants about implementing this tool for their use.

RESULTS

Approximately 50 officials participated.





Gulf Restoration Efforts

On April 20, 2010, an explosion on the Deepwater Horizon MC252 drilling platform in the Gulf of Mexico caused the rig to sink, and oil began gushing into the Gulf. Eleven crew workers tragically lost their lives in the explosion. The magnitude of this spill was something our nation had not seen before, causing significant impact to wildlife and the fishing community along the coastal areas of Alabama, Florida, Louisiana, Mississippi and Texas. To date, there have been multiple organizations focused on assisting the five Gulf states in recovering from the damage. The GMP plays a significant role in both Natural Resource Damage Assessment (NRDA) and Resources and Ecosystems, Tourist Opportunities, and Revived Economies (RESTORE) recovery initiatives. GMP provides key leadership to the RESTORE Council's Steering Committee, coordinating engagement of EPA resources (GMP, R4, R6, HQ) on numerous workgroups. GMP also implements specific projects led by EPA across the Gulf Coast region and serves on scientific and public engagement NRDA committees.



Natural Resource Damage Assessment

The Oil Pollution Act authorizes certain federal agencies, states and Indian tribes—collectively known as natural resource trustees—to evaluate the impact of the Deepwater Horizon oil spill on natural resources. These trustees comprise officials from the five Gulf states of Alabama, Florida, Louisiana, Mississippi and Texas. Along with the U.S. Environmental Protection Agency, the Department of the Interior and U.S. Department of Agriculture are responsible for studying the effects of the spill through a process known as Natural Resource Damage Assessment.

The Deepwater Horizon oil spill Natural Resource Damage Assessment Trustees settled with BP, the operator of Deepwater Horizon, for damages to natural resources resulting from the spill. The settlement concluded the largest natural resource damage assessment ever undertaken.

The Trustee Council has begun implementing the restoration as laid out in the comprehensive restoration plan.

The trustees recognize the historic significance of this settlement—the largest recovery of damages ever for injuries to natural resources. The settlement is a momentous step toward restoring the Gulf of Mexico, providing an unprecedented amount of funding dedicated to this iconic ecosystem.

This settlement shaped the Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement, finalized in February 2016.

As a trustee, EPA identified the Trustee Implementation Group (TIG) Representatives for the agency. Gulf of Mexico Program (GMP) staff members serve as primary and alternate EPA representatives on the TIGs for Alabama, Florida, Louisiana, Mississippi and region-wide. The GMP Director is also one of two alternates for EPA on the Trustee Council to support the EPA Designated Natural Resource Trustee Official. GMP staff members also serve as agency experts in the areas of monitoring and adaptive management, and injured species related to oysters and sturgeon. The efforts of the TIGs include developing and implementing restoration plans, as well as strategic planning for coordinated and larger scale restoration activities. As stated in the recently published “Mississippi Trustee Implementation Group 2016-2017 Restoration Plan and Environmental Assessment”, the GMP will help with the implementation of the Restoration Plan (a first implementing Trustee role for EPA). As part of the plan, the GMP will work with the U.S. Department of Agriculture and the state of Mississippi to conduct water quality monitoring to show baseline and success measures for the Upper Pascagoula Water Quality Enhancement Project.

As a result of the NRDA restoration efforts, many measures related to Gulf restoration will be monitored including: acres restored, water quality improved, recreational use improved, and injured species benefits.





Gulf Coast ECOSYSTEM Restoration Council

Following the catastrophic 2010 Deepwater Horizon oil spill, Congress passed and the president signed into law the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act of 2012 (RESTORE Act). A very important aspect of the RESTORE Act was that it established the Gulf Coast Ecosystem Restoration Council (the Council) and the Gulf Coast Restoration Trust Fund (Trust Fund).

Four projects that were included in the Initial FPL and will be led by the EPA:

\$2.5 million

Gulf of Mexico Conservation Enhancement Grant Program

The EPA is implementing the Gulf of Mexico Conservation Enhancement Grant Program (GMCEGP), a funding assistance opportunity to enhance private/public partnerships that support land protection and conservation across the Gulf Coast region. The program will be available to land conservation organizations such as land trusts, non-governmental organizations (NGOs) and state land preservation agencies across the Gulf Coast region through a competitive grant selection process. The projects and programs funded by the GMCEGP will focus on enhancing land protection and conservation in priority landscapes; improving habitats and water quality on conserved lands; enhancing the understanding of the benefit of land protection to communities through focused outreach and education supporting conservation and stewardship; developing and implementing conservation management plans; restoring and managing critical aquatic shoreline and upland habitat utilizing hydrologic, landscape, vegetation and wildlife management actions; and implementing other water quality and habitat restoration techniques. The EPA expects to award grants in early 2018.

\$2.1 million

Mobile Bay National Estuary Program

The EPA will enter into a cooperative agreement with the Mobile Bay National Estuary Program (MBNEP) to design, permit and implement a stream restoration project in Twelve Mile Creek, which has been negatively impacted from excessive stormwater runoff and decaying infrastructure, and to remove invasive species in the Three Mile Creek Watershed. The EPA awarded a cooperative agreement to MBNEP in September 2017 for the planning phase (design & permitting). The EPA expects to award the implementation phase in FY2018.



The Council membership includes the governors of the states of Alabama, Florida, Louisiana, Mississippi and Texas, as well as the secretaries of the U.S. Departments of Agriculture, Army, Commerce, Homeland Security and the Interior, and the Administrator for the EPA. The U.S. Department of Agriculture currently serves as the chair of the Council. The Council is responsible for helping to restore the ecosystems and economies of the Gulf Coast region by developing and overseeing implementation of a Comprehensive Plan and carrying out other responsibilities. If you are interested in reading more about the Comprehensive Plan, the RESTORE Act or the Council, please visit www.RestoreTheGulf.gov. In addition to carrying out its responsibilities, the Council is committed to public engagement and coordinating with other Gulf Coast restoration initiatives, including the NRDA for the oil spill, to ensure that restoration efforts

are community-supported and complementary.

The RESTORE Act dedicates 80 percent of civil penalties paid under the Clean Water Act (CWA) by responsible parties in connection with the Deepwater Horizon oil spill to the Trust Fund, for ecosystem restoration and economic recovery projects and programs in the Gulf Coast region. Of that 80 percent, 60 percent will be administered by the Council as follows:

- The Comprehensive Plan Component provides 30 percent to the Council for projects and programs it selects.
- The Spill Impact Component provides 30 percent to the Gulf states under a formula developed by the Council, in coordination with the five state members, for implementation of Council-approved State Expenditure Plans (SEPs).

On December 9, 2015, the RESTORE Council approved the Initial Funded Priorities List (FPL), using approximately \$180 million in allocated funds from a \$1 billion 2013 settlement with Transocean Deepwater Inc., to focus on 10 key watersheds across the Gulf, concentrating and leveraging funds to address critical ecosystem needs in high priority locations.

Under the Initial FPL, the EPA will lead four projects on the current FPL to work with local stakeholder groups to achieve near-term, on-the-ground ecosystem benefits, while also conducting planning activities designed to build a foundation for future success.

\$1.83 million

Tampa Bay Estuary Program

The EPA anticipates awarding a cooperative agreement to the Tampa Bay Estuary Program (TBEP) to support the implementation of five priority water quality and habitat improvement projects throughout the Tampa Bay Watershed. The five projects are:

- Biosolids to Energy with the City of St. Petersburg
- Copeland Park Stormwater Enhancements with the City of Tampa
- Coastal Invasive Plant Removal with Hillsborough County
- Robinson Preserve Water Quality and Habitat Restoration with Manatee County
- Ft. De Soto Recirculation and Seagrass Recovery with Pinellas County

The EPA continues to work with TBEP on design, engineering and environmental compliance for Cooper’s Point Water Quality Improvement, and anticipates seeking Council approval of funding in FY2018.

In March 2017, with support of the EPA and the State of Florida, the Council consolidated funding and implementation responsibility to the State of Florida for multiple components of the Palm River Restoration Project Phase II.

\$2.1 million

Gulf of Mexico Estuary Program

The EPA is standing up a place-based estuary program encompassing Perdido & Pensacola Bays in Florida’s northwest panhandle region. The Estuary Program will be modeled after the structure and operation of National Estuary Programs (NEPs), but will not be a designated NEP. This project will serve as a pilot project for the Council to consider expanding Gulf-wide when future funds become available. The EPA conducted a competitive selection process in FY2017 and will issue the cooperative agreement in early 2018.





Updates and Events

Mississippi Environmental Education Training

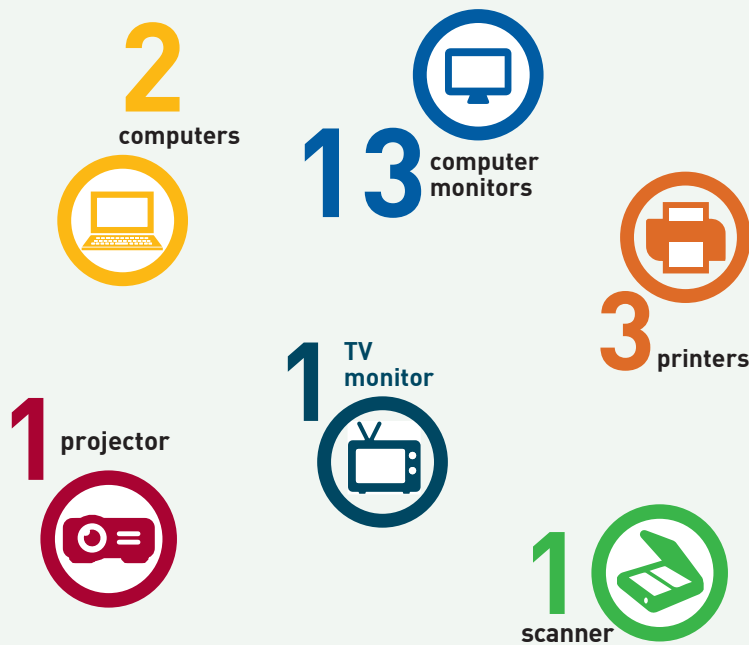
The Mississippi Environmental Education Training, sponsored by EPA offices (OAQPS, OEJ, and GMP) and the Mississippi Department of Environmental Quality, was designed to enhance awareness of efforts underway to improve, restore, and protect the environment. The training was also designed to promote collaborative problem solving among federal, state, and local agencies, businesses, and stakeholders to address environmental issues and share best practices and benefits of engaging in decision-making and implementation.

ORISE Fellows, Amanda, Kate, Allison, and Tony, served as panelists and spoke on the topic of youth leaders' involvement in environmental projects. While presenting on their work with the Gulf of Mexico Program, the fellows provided insight on how agencies can better involve youth in the work that they do and why youth engagement is critical when it comes to environmental issues. The panel concluded with an informative discussion of how environmental decision-makers can make more effective decisions, with an emphasis on the need to consult community members in the decision-making process.

Computers for Learning Program: Computer Donation

Executive Order 12999

"In order to ensure that American children have the skills they need to succeed in the information- intensive 21st century, the Federal Government is committed to working with the private sector to promote four major developments in American education: making modern computer technology an integral part of every classroom; providing teachers with the professional development they need to use new technologies effectively; connecting classrooms to the National Information Infrastructure; and encouraging the creation of excellent educational software. This Executive order streamlines the transfer of excess and surplus Federal computer equipment to our Nation's classrooms and encourages Federal employees to volunteer their time and expertise to assist teachers and to connect classrooms."



Gulf of Mexico Program staff members traveled to Denham Springs, LA on February 16, 2017, to deliver 28 pieces of electronic equipment as donations through the Computers for Learning Program. The donations were given to the Livingston Parish School District, a district devastated by the 2016 floods. Eight of the 15 schools in the district were completely destroyed.





Water Quality Monitoring in New Orleans East

GMP is working with Tulane University students and faculty, Mary Queen of Vietnam Community Development Corporation, Lake Pontchartrain Basin Foundation, New Orleans Sewage and Water Board and community representatives to monitor water quality in New Orleans East. This includes testing for and determining the source of E.Coli (ie. human vs. animal). The partnership plans to utilize data collected to determine the most efficient way to improve water quality.



2017 Celebrate the Gulf Marine Education Festival

The Gulf of Mexico Program awarded a grant to the Mississippi Department of Marine Resources in 1991 to sponsor the very first Celebrate the Gulf event. Since its inception, the event evolved into the premier marine and environmental festival attracting exhibitors from across the Gulf Coast and up the Mississippi River watershed. The GMP continues to support the event by facilitating experiential water quality activities and promoting stewardship and conservation of the Gulf of Mexico. More than 200 children visited

Long Beach High School College Career Day



GMP staff members participated in the Long Beach High School College Career Day. Approximately 30 local, state, and federal agencies, along with non-profit and military organizations were represented. GMP staff presented information to teachers and 58 students about the "Turkey Creek Water Quality Study," a study the GMP supports/conducts in conjunction with the local Gulfport community. As part of this project, EPA is training local K-12 students and college students to be "citizen scientists." Through participation in these events, EPA staff members deliver the scientific process to the public, demonstrate the importance of Science, Technology, Engineering and Mathematics (STEM) coursework and encourage students to pursue college careers in science and engineering.



Science, Technology, Engineering and Mathematics (STEM) Presentation - McComb High School

SUMMARY

Members of the Gulf of Mexico Program spoke to McComb High School STEM classes about sustainability and community resilience. Through this engagement, McComb High School solicited GMP's support in working together on a community garden and possibly a science field day. A science field day will afford students the opportunities to use field equipment and gain a better understanding of how to collect water quality samples.

RESULTS

Approximately 100 students participated.



EarthFest

SUMMARY

GMP staff members hosted an exhibition booth at the Audubon Zoo's EarthFest in New Orleans, LA on Saturday, March 18, 2017. The GMP booth consisted of an art project made from recycled CDs and a range of materials that can be recycled or reused. Staff members also demonstrated the importance of recycling by showing visitors how to cut plastic soda rings to make them safer for birds and turtles, and emphasized how animals often mistake plastic bags for food. Additionally a topic of discussion was the effects of fishing line on fish and birds. Exhibit participants learned how PVC pipes can be installed at boat launches and fishing piers for easily accessible recycling of fishing line.

RESULTS

Approximately 300 children/adults participated.

Partnering with 4-H Alabama Water Watch to Educate Alabama Youth on Citizen Science

SUMMARY

During 2017, GMP staff worked closely with the Alabama Cooperative Extension System (ACES) 4H Alabama Water Watch (AWW) Program to promote environmental education and citizen science. In 2015, AWW received an EPA Environmental Education Grant to provide teachers, volunteers, and 4-H agents with training materials and support needed to increase environmental stewardship and literacy for youth in Alabama. In 2017, 4H-AWW held a series of workshops across the state of Alabama (AL). Participants in the 4H-AWW workshops were trained and certified to use the AWW's Exploring Our Living Streams (EOLS) curriculum, which encourages a hands-on approach to teaching students about water quality, pollution, watershed stewardship, and citizen science. The flexible EOLS curriculum can be used in formal and informal settings with grades 4-12, is correlated to the AL Course of Study, and is endorsed by the AL Math, Science, and Technology Initiative (AMSTI). In addition, AWW is a State-Approved Stackable Credential for the Agriculture, Food, and Natural Resources Cluster. Once trained, these educators can help 4-H AWW youth gain confidence and have fun with science.

RESULTS

The educators will master a new skill and make a difference in their communities by teaching youth to do the following types of AWW water monitoring:

- Bacteriological Monitoring - Detect levels of E. coli and other coliform bacteria in water as indicators of contamination. Determine if water is safe for drinking, swimming and aquatic life.
- Water Chemistry Monitoring - Test physical and chemical characteristics of water to determine pollution sources and long-term trends in water quality. Six variables are measured with a customized test kit, and results can be compared with water quality standards that define conditions for healthy waterbodies. The six variables tested are pH, Hardness, Alkalinity, Air and Water Temperature, Dissolved Oxygen, and Turbidity.
- Stream Bio-assessment - Assess stream health using "aquatic bugs" (macroinvertebrates) as water pollution indicators. Training combines the use of field collections and an environmental game that simulates a stream bio-assessment.

For more information about potential workshops and training opportunities near you, visit <http://www.aces.edu/4-H-youth/AL4-H/resources/nature/environment/water.php>.



Ocean Fest - World Ocean Day

SUMMARY

Members of the Gulf of Mexico Program participated in the "Ocean Fest Event" at the Audubon Aquarium of the Americas on June 11th. Approximately 300 visitors to the Audubon Aquarium passed by the GMP display called "Refuse, Reduce, Reuse, and Recycle." Children were invited to create mosaic marine art using recycled CDs and DVDs. Positive feedback was received from both adults and children.

RESULTS

Approximately 300 children/adults participated.



National Estuaries Day at Grand Bay NERR

SUMMARY

ORISE Fellows participated in the 2017 National Estuaries Day at the Grand Bay NERR to celebrate the estuaries of the Gulf Coast and help educate the public about their importance and protection. Visitors learned more about how they can help protect our estuaries by reducing their impact through conscious environmental decisions like recycling. They also had the opportunity to create recycled artwork to take home as a reminder of the many ways they can create a healthier environment and be better stewards of our estuaries and the earth.

RESULTS

Approximately 65 visitors participated.





Environmental Justice Small Grant Awards

DEFINITION OF ENVIRONMENTAL JUSTICE

The EPA defines “environmental justice” as the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no one group of people, including racial, ethnic or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal and commercial operations or the execution of federal, state, local and tribal environmental programs and policies.

Meaningful involvement means that:

- Potentially affected community residents have an appropriate opportunity to participate in discussions about a proposed activity that will affect their environment and/or health
- The public’s contribution can influence the regulatory agency’s decision
- The concerns of all participants involved will be considered in the decision-making process
- The decision makers seek out and facilitate the involvement of those potentially affected

SUPPORT OF ENVIRONMENTAL JUSTICE

The GMP’s success with creating vibrant and healthy communities is a result of establishing a rapport with residents. Those communities vulnerable to social and environmental injustice face economic challenges and health disparities. To ameliorate conditions and initiate remediation efforts, the GMP, through the EPA Office of Environmental Justice’s Request of Application, funded the following community-centered projects:

STEPS COALITION

North Gulfport Water Quality Education and Leadership Development Program

The Steps Coalition (Steps) will implement an education and leadership development program that seeks to improve the water quality of Turkey Creek and connected waterways, and to mitigate the effects of climate change for nearby communities. The project will: 1) educate nearby communities about stormwater pollution prevention, improving water quality in the Turkey Creek watershed and preserving wetlands, and 2) identify and train leaders within the community to engage in a variety of activities that will improve the water quality of Turkey Creek and connected waterways and the climate resiliency of nearby communities.

CHOCTAW NATION OF OKLAHOMA

Choctaw Nation Project Oka

This grant will implement an education project focusing on the importance of keeping our water sources clean. The hands-on program will provide educational activities and recycling support to children, elders groups and civic groups. The goal is to help citizens recognize the critical role of each individual in reducing the negative impact of litter in the local environment, and protecting and conserving local waters.

GROUNDWORK NEW ORLEANS

Building Climate Resilient Communities

The project will focus on teaching students to design, build and install solar powered charging benches on or near bus stops in underserved communities. This will provide clean energy sources for public transportation users, educate community members and provide a green power source within the community in case of an emergency. The project goals are to:

- Address climate resiliency issues and community revitalization in two underserved communities
- Introduce green technology and innovative design career paths by creating a transferrable skill
- Provide community members with clean energy to use during daily

commutes and during emergency power outages, when individuals may only have cell phones to use for emergency calls

The project will increase public engagement capacity and efforts by providing educational signage on the importance of green energy.

COMMON GROUND RELIEF, INC.

Common Ground Relief Youth Wetlands Education and Outreach Program

This program utilizes the following integrated environmental justice strategies to reduce water pollution and improve urban water quality, and to improve the resilience of local wetlands in the face of erosion and sea level rise:

- Education of local youth about the function of healthy wetlands and watersheds, and about the vulnerabilities to environmental risks in their neighborhood and communities
- Active engagement of local youth in research, hands-on projects and monitoring aimed toward the prevention, reduction and elimination of water pollution
- Empowering local youth to actively participate and be a strong voice in the planning and decision making processes that impact the region’s sustainability





Senior Environmental Employment (SEE)

Senior Environmental Employment (SEE)

Through a cooperative agreement with the National Council on Aging, the Gulf of Mexico Program (GMP) employs enrollees of the Senior Environmental Employment (SEE) Program. These enrollees have helped and continue to help the GMP with making significant progress in reaching communities and establishing relationships. The work of the enrollees has catapulted education and engagement initiatives leading to resilient communities. The accomplishments of this work are highlighted below:



Second Annual Women's Health and Equity Workshop

The Gulf of Mexico Program sponsored the event on Thursday, September 13, 2017. The purpose of the workshop was to increase literacy on the importance of preserving, protecting, and enhancing the Gulf of Mexico by employing novel approaches to promote stewardship. The speakers covered an array of topics: environmental health, workforce development, mental health and wellness, environmental education, and sustainability. Participants were challenged to take action and share information with their communities. To increase awareness of resources essential to improving conditions holistically in communities, the audience was invited to partner with the Gulf of Mexico Program.

Workforce Development Partnership

PARTNERS

- Port of Gulfport
- University of Southern Mississippi - Gulf Park

SUMMARY

This partnership was created to promote workforce development opportunities for Mississippi Gulf Coast residents through an educational enhancement activities model. The model targets those in need of additional knowledge and skills that can help increase their potential for job placement with the Port of Gulfport and other Gulf Coast industries. It also connects education specialists with residents to help them become employment ready.

RESULTS

The Workforce Development Partnership is in the process of beginning training activities for residents and continues to develop the educational enhancement activities model.



34th Street Wholistic Gardens & Education Center

SUMMARY

The 34th Street Wholistic Gardens & Education Center, in coordination with the SEE enrollees, is offering events and activities at the gardens that serve communities, schools, and other organizations along the Mississippi Gulf Coast. Additionally, to assess specific community needs and to leverage resources, the SEE enrollees are identifying partner organizations/agencies critical to helping communities becoming more resilient and self-sustaining.

RESULTS

- Gardens received licensing for 20 years to operate on city property.
- Volunteers built over 100 raised beds for gardens.
- Food Corps (a division of AmeriCorps and national program) established a site to provide technical assistance for gardens.
- Collaboration with MS Gulf Coast Community Colleges and the Goldring Center for Culinary Medicine to establish partnerships to offer a culinary medicine model to residents of the Mississippi Gulf Coast.

Collaboration with El Pueblo and the 34th Street Wholistic Gardens & Education Center

PARTNERS

- El Pueblo Immigration Services
- 34th Street Wholistic Gardens & Education Center

SUMMARY

El Pueblo is a community outreach and advocacy organization that serves the Gulf Coast's immigrant community and most notably, its Hispanic and Latino residents. Through a partnership with the 34th Street Wholistic Gardens & Education Center, the GMP and El Pueblo will develop community outreach activities that address issues faced by the immigrant community. Together, the organizations will develop an MOU to create community activities inclusive of the Hispanic and Latino communities, including the cultivation of culturally significant foods as well as gardening and cooking classes.

Feds Feeds Families 2017

SUMMARY

The Gulf of Mexico Program collected and delivered food to a distribution center in Gulfport, MS. The food was loaded onto trucks and delivered to victims of Hurricane Harvey in Houston, TX. We are pleased to report that we saw twelve trucks, full of food donations, ready to be deployed. Additionally, on-line donations to food banks in San Antonio and central Texas were made.

Goldring Center for Culinary Medicine - Tulane University

SUMMARY

SEE enrollees and GMP staff members, along with staff members from both Mississippi Gulf Coast Community College (MGCCC) and the 34th Street Wholistic Gardens and Education Center participated in a tour of the Goldring Center for Culinary Medicine located in New Orleans, LA. During the tour, the group had an opportunity to observe a cooking class demonstration for military veterans. With guidance from culinary students and medical professionals, the veterans learned how to cook healthy meals. Additionally, the group was able to tour the onsite community garden managed by Sprouts NOLA, a partner of the Goldring Center. This tour was coordinated as part of a collaborative effort to build the Goldring Center's community engagement and resiliency model into current "on the ground" projects taking place at the 34th Street Wholistic Gardens and Education Center. This initiative is one of many resulting from a Memorandum of Understanding (MOU) between MGCCC and the U.S. EPA Gulf of Mexico Program.

The culinary medicine program at the Goldring Center is the epicenter for teaching medical professionals and communities how to select, prepare, and use food as medicine. The 34th Street Wholistic Gardens and Education Center is currently working with MGCCC to establish a partnership which will engage communities, along the Mississippi Gulf Coast, in similar opportunities as those offered by the Goldring Center.





National Academy of Science (NAS) Fellows

The NAS Gulf Research Program’s Science Policy Fellowship program helps scientists hone their skills by putting them to practice for the benefit of Gulf Coast communities and ecosystems. Fellows gain first-hand experience at the interface of science and policy as they spend one year on the staff of federal, state, local, or non-governmental environmental, natural resource, oil and gas, and public health agencies in the Gulf of Mexico region.

With the guidance of a mentor, fellows delve into activities like research, evaluation, restoration planning, stakeholder outreach, and policy development and learn what it takes to make scientific information not just useful but useable. Meanwhile, host offices get a talented technical expert with a fresh perspective and a new network of contacts across the Gulf of Mexico region.

The GMP hosts two NAS Fellows: Debra Butler, a Ph.D. student at the University of Massachusetts - Boston College of Management, and Philip Lee, a recent Ph.D. recipient from the University of Alabama Department of Biological Sciences. Both Fellows work closely with the Science Integration and Analysis Team on initiatives relating to water quality and habitat restoration, as well as environmental education, community outreach, and resiliency.

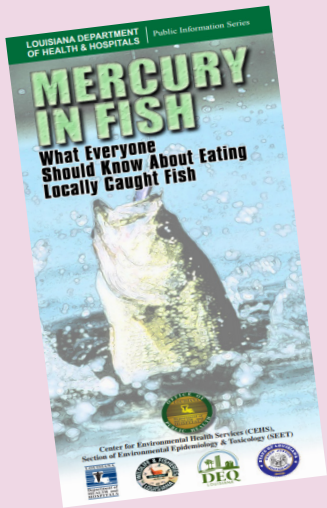
Innovative Pathways for Educating the Public About Heavy Metal Contamination

SUMMARY

As a NAS Fellow, Philip Lee is working to improve environmental awareness across the Gulf of Mexico by making scientific publications and outreach materials more accessible to the public. Central to these efforts is a focus on app development, where apps will be customized to allow the public to explore digital copies of documents focusing on contaminants like heavy metals that are of great concern for public health. The apps will also allow users to view documents in different languages, making them more accessible to those who do not speak English or for whom English is a second language.

transition from brochures

to user-friendly phone apps





Pollinator Restoration Project

SUMMARY

Debra Butler, worked closely with the Master Gardeners, a community outreach function of the Alabama Cooperative Extension Service (ACES), which published one of the first guides to variable climate farming near pollinator habitats. More than 100 trained volunteers serve communities in Mobile County with reliable, relevant research-based information and hands-on projects. ACES published the nation's first guide to variable climate farming which emphasizes the importance of pollinator habitats. The Master Gardener Program has a long standing relationship with the Mobile County Public School System.

The project is located on two sites: (1) historic elementary school on Dauphin Island, a barrier island and "flyway" for butterflies and other pollinators; and (2) the Mobile County ACES Teaching Garden. Dauphin Island Elementary School is the site of pollinator garden restoration focusing on native species. The project has three phases and will last 18 months.

The Pollinator Restoration Project began the initial garden restoration and planting phase in preparation for spring migrations. The garden site is the former location of the Little Red School House, built near shell mounds 90 years ago.

RESULTS

Water Quality:

The project location at the Jon Archer Center is a resource for gardeners, local farmers, and commercial growers. The teaching garden will feature pollinator support plants (nectar and pollen plants, and larval food sources) and hardy native species that reduce or mitigate the need for excess fertilizers and pesticides which can contaminate ground water, creeks, streams, and watersheds. The Junior Master Gardener Project will train students to assess baseline conditions, monitor changes, and report findings.

Environmental Education and Outreach:

The Dauphin Island site will impact the entire island school, local community, and tourist populations, estimated at 500+ individuals per year. In addition, Master Gardeners will feature the Pollinator Project in its monthly gardening column in Lagniappe Magazine, Facebook page, community events at the City Museum/ Ft. Conde historic garden, Mobile Botanical Gardens, Providence Hospital Festival of Flowers, as well as through cooperation and collaborations with other organizations. The Mobile County Master Gardeners Association (MCMGA) also provides education materials and programs as outreach to the public (lunch-and-learn seminars) and to children in public, private, and home school classrooms.

Community Resilience:

The relocated "Red School House" is being re-furbished as a community center adjacent to the Pollinator garden, and serves to expand a sense of "vested" ownership for the Island's residents. MCMGA will partner with community organizations, the local chamber of commerce, and the Dauphin Island Sea Lab. The project location is an excellent opportunity for EPA to introduce its partnership with MS-AL Sea Grant's Community resilience self-assessment indices and introduce it as a framework for community action.

Habitat Restoration:

The Pollinator project can expand protection and restoration of pollinator habitat by raising awareness of the value and vulnerability of pollinators in residential, agricultural, and commercial landscapes. The project is replicable due to the extensive network of Master Gardener volunteers and partnerships within the scope of the Gulf of Mexico Program.



Oak Ridge Institute for Science and Education (ORISE) Fellows

The Internship and Research Participation Programs at the U.S. Environmental Protection Agency (EPA) are managed by the Oak Ridge Institute for Science and Education (ORISE) under an interagency agreement between EPA and the U.S. Department of Energy (DOE).

The ORISE Internship and Research Participation Programs at EPA are STEM-related educational and training programs designed to provide students, recent graduates, and university faculty opportunities to participate in project-specific EPA research and developmental activities.

With the Science Integration and Analysis Team, Fellows Amanda Kincke-Tootle and Kate Doering conduct water quality assessments along with community members and students to determine pollution sources and recommended solutions. They also assist with identifying and evaluating environmental problems plaguing marginalized and overburdened minority communities.

With the Partnerships Team, Fellows Tony Nguyen and Allison Williams facilitate environmental education and community outreach activities with a primary focus on reaching underserved communities and promoting awareness of environmental challenges. The Fellows also focus on establishing partnerships between the Gulf of Mexico Program, local organizations and agencies, and coastal communities in an effort to promote collaborative problem-solving.

Water Quality Assessments and Source Tracking

SUMMARY

ORISE Fellows, Kate Doering and Amanda Kincke-Tootle, have been attaining hands on knowledge of different sampling techniques through the Turkey Creek RARE Project. These techniques include in situ water collection, environmental condition measurements, and lab analysis of water samples. Sampling for the Turkey Creek Rare Project provides quality assured water data and E. Coli levels for local Gulf decision makers by using bacterial fecal indicators to help identify pollution sources within the watershed.



The Science Seminar Series

SUMMARY

Through their project “The Science Seminar Series,” ORISE Fellows Allison Williams and Tony Nguyen developed a series of interactive modules for high school students to increase awareness of environmental issues affecting the Gulf of Mexico. The modules incorporate classroom activities and site visits with local partners that emphasize fundamental concepts of environmental science while empowering youth to mitigate environmental problems and be better stewards of the earth. The program will be piloted at Gulfport High School during the 2017-2018 academic year, with the possibility of expansion across the Gulf Coast.



First Science Seminar Series Day

PARTNERS

- Gulfport High School
- City of Gulfport

SUMMARY

The first Science Seminar Series Day was held at Jones Park in Gulfport, Miss. Gulf of Mexico Program staff members taught students from Gulfport High School about the Gulf of Mexico watershed, its vast geographic extent, and how human impacts along the watershed affect the ecological health of the Gulf and its residents. Students also learned about the importance of water quality monitoring and had the opportunity to work with instruments used by EPA staff in their monitoring efforts. The lessons learned from this first meeting will shape future seminar days, where the ORISE Fellows will connect students with local organizations and agency partners to further expand their understanding of the Gulf of Mexico watershed and efforts underway to protect it.

RESULTS

36 students and 2 teachers participated in the event and were introduced to the Gulf of Mexico watershed and its importance.





Awards

Donald J. Guinyard Pioneer Career Achievement Award

Lael Butler

EPA Region 4 presents this award to an individual who has demonstrated a long-term commitment to the protection of human health and the environment, has earned the respect of his/her peers and has demonstrated either a dedication to assisting others within EPA or through community service.



Community Appreciation Award

Claudette Walker

Claudette received the Peoples Bank's Community Appreciation Award. The award recognizes community leaders and their commitment to community engagement.

Business Services Award

Claudette Walker

Claudette received the Business Appreciation Award from the Gulfport Job Corps Center. The award recognizes community leaders that support opportunities for and the engagement of Job Corps students in community events and services.

One Gulf Coast Community Leadership Award for Community Engagement

Claudette Walker

The One Coast Awards, presented by Mississippi Gulf Coast Chamber of Commerce, Inc. in conjunction with the Hancock County Chamber of Commerce, Ocean Springs Chamber of Commerce and Jackson County Chamber of Commerce, were created to continue the ideal that One Coast is a regional belief that our common interests far outweigh any difference; an awareness that what benefits one, ultimately benefits all; a celebration of our unique communities and an attitude of no boundaries.

Claudette Walker received the "One Coast Award" for her commitment to improving the lives of residents along the Gulf Coast, bridging gaps, encouraging parity and promoting long-term partnerships critical to healthy communities.





Bronze Awards

Gulf of Mexico Community Environmental Monitoring Team

The team is recognized for the creation of partnership-based laboratories and monitoring where community members, students, and scientists can work hand-in-hand to monitor, analyze, and develop solutions to improve local water quality and protect public health.

Jeanne Allen
 Robin Allen
 Matt Beiser
 Jerry Binninger
 Lael Butler
 Rachel Houge
 Gerry Martin
 Calista Mills
 Amy Newbold
 Leif Palmer
 Troy Pierce
 LaKeshia Robertson

Danny Wiegand
 Darryl Williams



Promoting Environmental Stewardship Team

The team is recognized for creating an evolutionized system for educating youth and adults through proven pedagogical experiential learning methods.

Jeanne Allen	Gerry Martin
Matt Beiser	Calista Mills
Jerry Binninger	Amy Newbold
Gerard Boos	Troy Pierce
Lael Butler	LaKeshia Robertson
Rachel Houge	Danny Wiegand

Efficient Management and Processing of Grant Awards

The team is recognized for comprehensively assessing the grants management process and making it more efficient.

Matt Beiser
 John Bowie
 Lael Butler
 Rachel Houge
 Gerry Martin





GMP

THE GULF OF
MEXICO PROGRAM
www.epa.gov/gulfofmexico

2510 14th Street, Suite 1212
Gulfport, MS 39501

(P) (228) 679-5900
(F) (228) 679-5921